

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:)	
)	
Mobil Oil Corporation)	
Joliet, Illinois)	ADMINISTRATIVE ORDER
)	EPA-5-113(a)/114-IL-98-15
)	
PROCEEDINGS PURSUANT TO)	
SECTIONS 113(a) and 114)	
OF THE CLEAN AIR ACT.)	
)	
_____)	

STATUTORY AUTHORITY

The following Order is issued pursuant to Sections 113(a) and 114 of the Clean Air Act (Act), 42 U.S.C. §§ 7413(a) and 7414.

REGULATORY BACKGROUND

1. On April 30, 1971, in accordance with the Act, the Administrator of the United States Environmental Protection Agency (U.S. EPA) published National Ambient Air Quality Standards (NAAQS) to protect the public health and secondary standards to assure the public welfare. Section 110 of the Act, 42 U.S.C. § 7410, requires each State to submit a State Implementation Plan (SIP), designed to achieve and maintain the NAAQS, to the Administrator of the U.S. EPA.
2. The U.S. EPA approved 35 Illinois Administrative Code (IAC) § 216.361, governing the emission of carbon monoxide (CO) gas from a petroleum or petrochemical process direct flame afterburner or CO boiler, as part of the Illinois SIP on May 31, 1972 (37 FR 10862).
3. The U.S. EPA approved 35 IAC § 212.381, governing the particulate emission rate from catalyst regenerators of fluidized catalytic converters, as part of the Illinois SIP on May 31, 1972 (37 FR 10862).
4. Section 113(a)(1) of the Act, 42 U.S.C. § 7413(a)(1), states that "[whenever, on the basis of any information available to the Administrator, the Administrator finds that any

person has violated or is in violation of any requirement or prohibition of an applicable implementation plan..., the Administrator shall notify the person and the State in which the plan applies of such finding. At any time after the expiration of 30 days following the date on which the notice of a violation is issued, the Administrator may, without regard to the period of violation... (A) issue an order requiring such person to comply with the requirements or prohibitions of such plan or permit."

5. Section 114(a) of the Act, 42 U.S.C. § 7414(a), states that "[f]or the purpose... (ii) of determining whether any person is in violation of any... standard or any requirement of [any implementation] plan, ... (1) the Administrator may require any person who owns or operates any emission source, ... on a one-time, periodic or continuous basis to: (A) establish and maintain such records; (B) make such reports; (C) install, use and maintain such monitoring equipment, and use such audit procedures, or methods; ... (E) keep records on control equipment parameters, ...; (F) submit compliance certifications in accordance with [Section 114(a)(3) of the Act]; and (G) provide such other information as the Administrator may reasonably require;"

FINDINGS OF VIOLATION

6. Mobil Oil Corporation (Mobil), owns and operates a petroleum refinery, as defined at 40 C.F.R. § 60.101(a), located in or near Joliet, Illinois, including a fluid catalytic cracking unit (FCCU) with a catalyst regenerator and two carbon monoxide (CO) boilers subject to particulate and CO limitations found at 35 IAC §§ 212.381 and 216.361.
7. The U.S. EPA issued a Request for Information Pursuant to the Clean Air Act (Section 114 Request) to Mobil on September 7, 1994. The Section 114 Request required Mobil to, among other things, perform a stack test on the FCCU and accessory equipment according to specific instructions and under specified conditions, which were intended to ensure that the sampling reflected normal and representative operating conditions of the unit.
8. The stack test requested in the Section 114 Request was conducted by Mobil on December 1 and 2, 1994. The results of the stack test revealed violations of 35 IAC §§ 212.381 and 212.361. Specifically, the December 1, 1994, test run number 2 result of the stack test determined that the actual

particulate emission rate from the FCCU was 102.42 pounds of particulate per hour, while the allowable emission rate, as calculated by the method set forth in 35 IAC § 212.381, was 97.73 pounds of particulate per hour. Mobil's actual CO emission concentrations as determined by three runs of the December 1994 stack test were 179 parts per million (ppm), 345 ppm, and 382 ppm, for an average of 302 ppm, while the allowable emission concentration set forth in 35 IAC § 216.361 is 200 ppm. In addition, the stack test was conducted in a manner which did not fully comply with the instructions in the Section 114 Request issued by the U.S. EPA to Mobil.

9. On March 1, 1995, the Administrator issued to Mobil a Notice of Violation pursuant to Section 113(a) of the Act, 42 U.S.C. § 7413(a), for violations of IAC §§ 212.123, 212.381, 216.361, and Section 114 of the Clean Air Act. The Notice is incorporated herein by reference.
10. Mobil was offered an opportunity to meet with the U.S. EPA to discuss the Notice of Violation. Such conference was held on March 31, 1995, in the U.S. EPA's Chicago office.
11. Mobil conducted additional stack testing for particulate matter and carbon monoxide on June 13, 1995; for particulate matter on September 20, 1996; for particulate matter and carbon monoxide on May 20 and 22, 1997; and for particulate matter on June 3, 1998; and demonstrated compliance on those dates for the standards tested.
12. In January 1997, U.S. EPA and Mobil entered into a Consent Agreement and Consent Order (CACO) pursuant to Section 113(d) of the Clean Air Act, 42 U.S.C. Section 113(d), which represents a full and final settlement of penalty claims by U.S. EPA against Mobil arising from the alleged violations.

ORDER

After review of information submitted by Mobil to the U.S. EPA and a thorough investigation of all relevant facts, taking into account the seriousness of the violations and efforts made by Mobil to comply with applicable regulations, it is determined that the following requirements are agreed and ordered and are reasonable.

THEREFORE, IT IS HEREBY ORDERED AND AGREED THAT:

13. As of the effective date of this Order, Mobil shall maintain continuous compliance with all applicable portions of the Illinois SIP, including 35 IAC Rules 212.381 and 216.361 (and any other applicable federally approved Illinois SIP rules replacing and/or supplementing Rules 212.381 or 216.361), at its Joliet, Illinois refinery.
14. In lieu of installing a continuous emissions monitor for monitoring CO emissions from the FCCU, Mobil has proposed to install a continuous temperature monitor, alarm and recording system downstream of the CO Boiler bypass valve (the monitor may be placed on the horizontal section of piping). Mobil takes the position that the temperature in the horizontal section of the CO Boiler bypass line is a reliable indicator of CO levels in the stack exhaust. Given the facts of this matter, and based on the agreements set forth in this Order, U.S. EPA agrees to accept the monitoring system proposed by Mobil.
15. In order to demonstrate continuous compliance with Rule 216.361, by December 31, 1998, Mobil shall install, calibrate, and operate a continuous temperature monitor, alarm and recording system downstream of the CO Boiler bypass valve, and utilize a portable CO monitor to measure the CO level in the FCCU common stack, in accordance with the procedures and timetable set forth in Appendix A of this Order.
16. Beginning thirty (30) calendar days after the end of the calendar year quarter during which the temperature monitor system described in the above Paragraph is installed and operational, and thereafter within thirty (30) calendar days of the end of each subsequent calendar year quarter, in accordance with Appendix A of this Order, Mobil shall submit a written report on the temperature monitor system, and the portable CO monitor readings. Temperature and CO monitor reading records shall be retained by Mobil and available for inspection for a period of not less than two (2) years from the time that they are generated.
17. Mobil agrees that the CO level measured in the FCCU common stack with a portable CO monitor, as specified in Appendix A, or the CO level measured during stack testing, as specified in Appendix B, shall be utilized for purposes of determining the facility's compliance with 35 IAC § 216.361. Nothing in this Order supersedes start-up, malfunction, or

breakdown conditions granted in valid operating permits.

18. Mobil shall conduct three annual stack tests on the common stack to determine the carbon monoxide emission rate and the opacity of the emissions in accordance with the procedures outlined in Appendix B of this Order. The first of these annual tests shall be conducted in 1999.

GENERAL PROVISIONS

19. Nothing contained in this Order shall affect the responsibility of Mobil to comply with all applicable Federal, State or local laws or regulations, including Section 303 of the Act, 42 U.S.C. § 7603.
20. Mobil has been notified that it is subject to civil administrative penalties pursuant to Section 113(d) of the Act, 42 U.S.C. § 7413(d), and pursuant to a CACO, entered into in January 1997, has paid civil penalties for the violations of 35 IAC §§ 212.123 and 212.381 cited above.
21. Nothing in this Order shall be construed to prevent, or limit, the U.S. EPA's right to collect penalties and pursue appropriate relief under Sections 113(b) and 113(d) of the Act, 42 U.S.C. §§ 7413(b) and 7413(d), for future violations.
22. Pursuant to Section 114 of the Act, 42 U.S.C. § 7414, the Administrator or authorized representatives of the U.S. EPA upon presentation of his or her credentials and subject to applicable safety requirements, shall have the right of entry into, upon and through the Mobil refinery, Joliet, Illinois, for the purpose of carrying out any inspections, taking photographs (upon notification), and at reasonable times, reviewing any records, and, subject to applicable safety requirements, observing tests, and conducting any tests, which are deemed by the Administrator to be necessary to ensure compliance with this Order.
23. Nothing in this Order shall be construed to restrict in any way, the U.S. EPA's authority under Section 114 of the Act, 42 U.S.C. § 7414.
24. Pursuant to regulations appearing in 40 C.F.R. §§ 2.100 et seq., Mobil is entitled to assert a business confidentiality claim covering any part of the submitted information which is not emission data or necessary to determine emission

data. Failure to assert such a claim makes the submitted information available to the public without further notice. Information subject to a business confidentiality claim may be available to the public only to the extent set forth in the above-cited regulations.

25. The provisions of this Order shall apply to and be binding upon Mobil, its officers, directors, employees, agents, any successor(s) in interest, and all persons, firms and corporations who are, or will be, acting on behalf of, in concert with or in participation with Mobil in any acts governed by the terms of this Order. Mobil shall give written notice of this Order to any successor in interest prior to transfer of ownership, and shall simultaneously notify the U.S. EPA, Region 5, that such notice has been given.
26. Mobil shall submit all information and reports required by this Order to the U.S. EPA and the Illinois Environmental Protection Agency (IEPA) within the time frames prescribed in this Order. All information and reports shall be sent to:

Bonnie Bush (AE-17J)
Air Enforcement and Compliance Assurance Section
(IL/IN)
Air Enforcement and Compliance Assurance Branch
U.S. Environmental Protection Agency
Region 5
Chicago, Illinois 60604-3590
telefax: (312) 353-8289

with a copy to:

David Kolaz, Chief
Bureau of Air
Illinois Environmental Protection Agency
P.O. Box 19276
Springfield, Illinois 62794-9276

27. All submissions or reports required under this Order shall be accompanied by the following certification by a responsible official of Mobil:

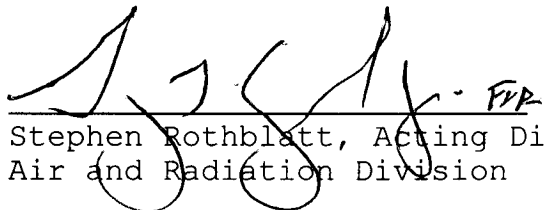
"I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the

information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment."

28. All information collected pursuant to this Order can be used for civil, criminal, and administrative enforcement purposes.
29. This Order, together with the January 1997 CACO under Section 113(d) of the Act, constitute the entire agreement between the parties related to Mobil's compliance with the NAAQS, Illinois SIP and the Act in this matter.
30. This Order is not subject to the Paperwork Reduction Act, 44 U.S.C. § 3501 et seq., because it seeks collection of information in an administrative action or investigation involving the U.S. EPA and specific individuals or entities.

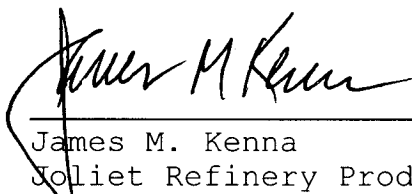
31. This Order is effective on the date of signature by the Director, Air and Radiation Division, and shall terminate three (3) years after the date of signature by the Director, Air and Radiation Division, U.S. EPA, Region 5, provided that all provisions of this Order have been fulfilled and that Mobil maintains compliance throughout the life of the Order. If violations are identified during the life of this Order, it shall remain in effect until Mobil has demonstrated 3 years of continuous compliance.

11/25/98
Date


Stephen Rothblatt, Acting Director
Air and Radiation Division

Mobil Oil Corporation consents to the issuance of this Order and waives any and all rights to challenge this Order.

11/19/98
Date


James M. Kenna
Joliet Refinery Production Manager
Mobil Oil Corporation
Joliet Refinery
Joliet, Illinois 60434

APPENDIX A

FCCU/CO BOILERS COMMON STACK ALTERNATIVE CO MONITORING PROCEDURE

1. In lieu of installing a continuous emissions monitor for monitoring CO emissions from the FCCU, Mobil takes the position that the temperature in the CO Boiler bypass line is a reliable indicator of CO levels in the stack exhaust. Accordingly, Mobil and U.S. EPA agree that Mobil may use a continuous temperature monitoring and recording system in the CO Boiler bypass line to demonstrate continuous compliance with Rule 216.361.
2. Mobil shall install, calibrate, and begin operation of a continuous temperature monitoring and recording system in the CO Boiler bypass line by December 31, 1998. The monitor may be placed in the horizontal section of the CO Boiler Bypass Line.
3. Mobil and U.S. EPA agree that a monitored CO Boiler bypass line temperature of 400 degrees Fahrenheit (400°F) or above is indicative of CO levels above 200 ppm corrected to 50 percent excess air being exhausted from the stack.
4. For periods for which there are both portable CO monitor readings and CO Boiler bypass line temperature readings, there shall be a rebuttable presumption that the portable CO monitor readings are the best evidence of the CO levels being emitted from the stack.
5. The temperature sensor shall be connected to the process control computer system, and alarms shall be set in the process computer control system to alert the process operators in the control room that temperatures have risen to or above 360 degrees Fahrenheit (360°F). A temperature reading of 360-399°F shall not be considered a violation of the relevant standard.
6. Within two hours of triggering of the temperature alarm, Mobil shall measure the CO level in the FCCU common stack with a portable CO meter, unless it is night, or weather or upset process conditions make it unsafe to measure the CO level. If the temperature alarm is triggered at night, Mobil shall measure the CO level within one hour of sunrise. If weather or upset process conditions exist when the temperature alarm is triggered, then Mobil shall measure the CO level within one hour of the conditions becoming safe. The CO level shall be recorded, and for the duration of the temperature alarm condition, Mobil shall continue to measure

and record the CO level in the common stack at one hour intervals.

7. Mobil shall investigate and document the cause of each temperature alarm condition and describe any and all measures taken to correct it. The documentation shall also include the duration of the temperature alarm condition, a record of the CO Boiler Bypass Line temperature, in one minute intervals for the first six hours of the alarm condition and a minimum of one hour intervals thereafter, from the start of the alarm condition to the end of the alarm condition, and include the time and CO level for all CO measurements taken with the portable CO meter during the alarm condition as specified in paragraph 6, above.
8. Mobil shall run a self-test/automatic zero calibration check on the portable CO meter once a week. Mobil shall keep a written record of the self-test/automatic zero calibration checks.
9. Mobil shall retain all records specified in this Appendix on the premises for at least 2 years and provide copies to the U.S. EPA or IEPA upon request.
10. Mobil shall, no later than 30 days after the end of each preceding calendar quarter, submit to U.S. EPA and IEPA a report summarizing the data from the CO Boiler bypass line temperature sensor system.
11. Mobil shall submit the first 4 quarterly reports to U.S. EPA and IEPA, and thereafter, shall submit each quarterly report to IEPA.
12. Such reports shall document all times during which the CO Boiler bypass line temperature exceeded 360°F, and all CO readings measured with the portable CO meter.
13. Such reports shall contain the date and time of commencement and completion of each incident where the CO Boiler bypass line temperature exceeded 360°F ("temperature alarm condition"), magnitude of the temperature alarm condition, probable cause of the temperature alarm condition, and a description of any corrective action taken.
14. If no temperature alarm conditions occur, and the portable CO meter is not required to be used during a calendar quarter, Mobil shall submit a report no later than 30 days after the end of the calendar quarter stating so.

APPENDIX B

PROCEDURES FOR CARBON MONOXIDE EMISSION AND OPACITY TESTING

1. Mobil shall perform an annual carbon monoxide emission test on the FCCU in accordance with U.S. EPA Method 10. In addition, whenever Mobil performs particulate emission testing in under IEPA requirements, Mobil shall also perform opacity testing in accordance with U.S. EPA Method 9. These Methods are found at 40 C.F.R. Part 60, Appendix A.
2. For scheduling purposes, the carbon monoxide testing required by this Appendix may be conducted in conjunction with the annual particulate emission testing conducted by Mobil under IEPA requirements.
3. Each emission test shall consist of three runs, with each run being a minimum of 60 minutes, during which the FCCU is operating at parameters which are representative of maximum emission rates.
4. The CO emission tests and particulate emission tests performed under IEPA requirements, for which results are submitted to U.S. EPA under this Order, shall be performed on the FCCU after a period of at least 3 weeks of operating during which no cleaning or rehabilitation (other than normal maintenance) has occurred.
5. When Mobil performs annual particulate emission testing under IEPA requirements, for 30 days prior to such emission testing, Mobil shall record and maintain the following operating parameters of the FCCU on a daily basis:
 - A. FCCU fresh gas oil feed (barrels per day)
 - B. Catalyst circulation rate (tons per hour)
 - C. Maximum cold catalyst addition rate (tons per hour)
 - D. Sulfur content of the FCCU feed.
6. Visible emissions observations pursuant to paragraph 1 of this Appendix shall be performed by a certified observer in accordance with U.S. EPA Method 9, 40 C.F.R. Part 60, Appendix A, throughout each particulate emission test run. The results shall be documented and included in the final report for each annual test.
7. Any other particulate or carbon monoxide emission test runs conducted or attempted at Mobil's Joliet refinery at any time after the date of this Order shall be documented and

the results included in the final report for each subsequent annual test.

8. Notification of all emission testing required by this Order and the testing protocol shall be sent to U.S. EPA and IEPA at least 15 days prior to the test date. Subject to applicable safety requirements, personnel designated by the agencies shall be permitted to observe all required testing, ask questions of testing personnel, and make whatever records, including photographs and tape recordings (upon notification), as are deemed necessary by the agency personnel.
9. The results of all emission testing required by this Order and the results of particulate matter emission testing required by IEPA shall be submitted in a bound final report to the U.S. EPA and the IEPA within 30 days after completion of the testing. The final report shall contain the results of the testing (including raw data sheets), the reporting of all applicable operating parameters, including, but not limited to, those identified in paragraph 5, above, the information required in paragraphs 6 and 7 above, and the continuous opacity monitoring data generated throughout each particulate matter test run.